

**Response to Tomz, Goldstein, and Rivers’
“Membership has Its Privileges:
The Impact of GATT on International Trade”**

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Summary

In this paper, Tomz, Goldstein, and Rivers (hereafter “TGR”) argue that the General Agreement on Tariffs and Trade and its successor the World Trade Organization (hereafter “GATT”) had a substantial positive effect on trade. Their paper is a critique of my article “Do We Really Know that the WTO Increases Trade?” which appeared in the *American Economic Review* 2004. I used a bilateral “gravity” model of trade and showed that dummy variables for membership by either one or two countries in the GATT had only small effects on trade. In essence, TGR point out that a lot of countries were not formal members of the GATT but still participated in it as colonies, *de facto*, or provisional members. TGR argue that if one includes these other types of more informal membership, you get large positive effects.

For what it’s worth, I stated in my original article that *de jure* accession to GATT need not be the same as *de facto* accession, but I wasn’t able to quantify it and encouraged others

to do so. TGR did precisely that, at the cost of much tedious archival work. I applaud them for it and will certainly not question its accuracy. I also like their methodological strategy, which is to follow my empirical framework closely and rely mostly on simply changing membership data (they don't follow my estimation strategy completely; more on that below). It's a clean and effective way to proceed.

I like this paper, and have learned a lot by reading it, and thinking about the issues it raised. All who are interested in the topic of the impact of the multilateral system on trade should take it seriously. Since I'm personally involved in the issues, I'll make no formal judgment about publishability in its current form. Still, their work raises a number of concerns in my mind that I want to articulate. My questions concern the meaning, plausibility and robustness of their results.

Introductory Comments

A few things before I get into the meat. First, I take any critique as the most serious sign of academic praise, so I thank TGR for caring enough to write their paper.

Second, I want to emphasize that there are many things in TGR with which I agree. For instance, TGR are clearly right that most colonies aren't formal members but were covered by the GATT. I should have coded them accordingly myself (and actually intended to). Ditto on other small data issues raised by TGR (e.g., coding Comoros, various colonies, Benin, etc.)

Third, a note of puzzlement.² When I present this research at seminars, the initial reaction to my finding of GATT irrelevance is inevitably disbelief. Still, within an hour or so, almost everyone thinks that I've actually found little that's new. That is, once one has reflected a

¹ I gratefully acknowledge helpful conversations with Mike Tomz, and access to his data sets. Relevant output is available at my website, <http://faculty.haas.berkeley.edu/arose>

² This is lifted from my response to Subramanian and Wei.

little, it seems reasonable (to both me and others) that membership in the GATT might have had little effect on trade. Why? Reasons include the following:

1. Many believe that the GATT historically made few demands on most countries in terms of trade liberalization, since most entrants to the GATT were developing countries eligible for special and differential treatment. (More on this below.)
2. Most Favored Nation (MFN) status might seem like the great prize of GATT membership. It turns out that MFN status is often given freely away to countries outside the GATT.³
3. Tariffs have been lowered by developed countries under the auspices of the GATT. But most economists are also well aware of the (deplorable) fact that non-tariff barriers (NTBs) have often been increased as substitute protectionism.
4. In the voluminous and controversial literature on trade and growth, no scholar, to my knowledge, has ever dated trade liberalization with GATT accessions. (Sachs and Warner 1995, for instance, tie liberalizations to the aftermath of macroeconomic crises.) If accession means liberalization and trade growth, why has no one ever tried to figure out if growth follows GATT accession?
5. There are other reasons why trade has grown: declining transportation costs, higher productivity growth in tradables, and so forth.

Plausibility

The Essential Role of Developing Countries

The TGR argument hinges essentially on certain developing countries that informally participated and seemed to trade more than outsiders.⁴ Is this plausible? Possibly, since the

³ For instance, in 2003 only four countries (Cuba, Laos, North Korea, and Serbia) did not have normal trade relations (the equivalent of MFN status) with the United States, even though many countries were not in the WTO (Russia and Saudi Arabia being perhaps the most prominent non-members). That said, I don't know of a

outsiders were also mostly developing countries. Still, it's ironic to me that I've been criticized by Subramanian and Wei (and others) for including ANY developing countries at all. Their basic view (and that of many others) is that the GATT was essentially a club for developed countries.⁵ Their argument is that by including developing countries that are GATT members technically but not in spirit, I've rigged the analysis to make the GATT look irrelevant. TGR say the opposite, which strikes me as odd, at least *prima facie*. Their view is that the relevance of the GATT can be rescued *only* by including developing countries, which aren't formally members but are in spirit.

Since my issue here is really the incongruity of TGR with the literature, let me include a couple of typical excerpts that might illustrate my discomfort. I just received *Free Trade Agreements* (edited by Schott, IIE 2004). Schott states (pp 9-10):

“Why are developing countries so interested in FTAs? In the past, these countries were able to obtain improved access to industrial markets through GATT negotiations that did not require them to reciprocate by opening their own markets to foreign competition. While useful, prior GATT rounds had two major shortcomings: they did not prompt policy changes in developing countries that would induce adequate flows of investment and transfers of technology (apart from extractive industries), and competitive agricultural and manufactured exports of developing countries often were excluded from the reforms. In short, developing countries were free riders on the GATT system until the Uruguay Round, but derived only modest benefits from their own minimal contributions to GATT negotiations. They protected their own markets, but in turn had to accept the maintenance of high foreign trade barriers against their most competitive exports.”

Alternatively, Anne Krueger writes in the introduction to *The WTO as an International Organization* (p7):

“Developing countries’ attitudes and trade policies during the 1950s and 1960s generally resulted in heightened walls of protection as industrialization through “import substitution” was attempted. That generally meant that developing countries were not benefiting as much as they might have from the growth of the world economy, while the “balance-of-payments” provisions of the GATT were liberally interpreted to enable

source for MFN that covers a large span of either countries or time, and don't want to over-state the strength of this evidence. This seems like a good area for future research.

⁴ Removing all developing countries means that GATT participation has a statistically small effect on trade; more on this below.

⁵ The WTO may have changed the regime recently; more on this below.

developing countries to maintain quantitative restrictions, often including import prohibitions, on their imports. Moreover, the GATT articles were amended in the early 1960s to provide non-reciprocal preferential treatment of imports from those countries. One consequence was that developing countries (the East Asian newly industrializing countries being a prominent exception) were losing shares of their world markets ... Until the 1980s, therefore, it appeared that the world was divided into three major trading areas: the industrialized countries and the newly industrializing countries, the other developing countries, and the centrally planned economies.”

It’s worth stressing that developing countries really are key to TGR. The first few rows of their Table 4 indicate that *GATT participation has a statistically weak (though positive) effect on trade when you look only at industrial countries*. The effect is larger and statistically significant when you include developing countries.

Effects of Informal Participation and Formal Membership

One of the striking features of TGR’s results, which they acknowledge, is that *informal participation* consistently matters more for trade than *formal membership*. This doesn’t seem wholly plausible to me (at least not without some explanation), and is a cause for concern. I simply don’t understand why informal participation could create more trade than actual membership in the GATT.

The hypothesis that informal participation in the GATT is equal to formal membership is eminently testable, in terms of both economic and statistical significance. It is always rejected. Consider the OLS specification of Table 2, col. 3 of TGR. Two formal GATT members share 19% more trade *ceteris paribus*, while a pair of informal GATT participants enjoys 123% more trade (an informal GATT participant trades 51% more with a formal member). These differences are economically huge and statistically distinguishable at the .0000 level. Ditto, the results that use dyadic fixed effects (FE) in col. 5.⁶ Is this a cause for concern?

⁶ TGR avoid this issue by using a default specification that includes a single dummy variable for participation, whether formal or informal.

A related point concerns the different types of informal participation. There are three types of informal membership: colonies, *de facto* membership, and provisional membership. One might ask: are they alike economically? Statistically? The answers are tabulated below. I provide two tables: one for results pooled across time, and another for cross-sections.

Effects of Different Types GATT Participation on Trade*

	Dyadic Fixed Effects	OLS
Member-Member	.47 (.06)	.17 (.07)
Member-Colony	.66 (.07)	.63 (.08)
Member-De Facto	.60 (.07)	.40 (.08)
Member-Provisional	.31 (.07)	-.12 (.09)
Colony-Colony	1.52 (.20)	1.67 (.20)
Colony-De Facto	.91 (.14)	1.03 (.21)
Colony-Provisional	.54 (.15)	.34 (.14)
De Facto-De Facto	.93 (.17)	.62 (.28)
De Facto-Provisional	.62 (.17)	-.16 (.18)
Provisional-Provisional	.26 (.26)	-.26 (.23)
Member-Outsider	.23 (.06)	.06 (.07)
Colony-Outsider	.52 (.09)	.54 (.11)
De Facto-Outsider	.34 (.09)	.32 (.13)
Provisional-Outsider	.08 (.08)	-.13 (.12)
Test: All (10) types of participation equal? (P-value)	.0000	.0000
Test: All (9) types of informal participation equal? (P-value)	.0000	.0000

* Robust standard errors in parentheses. 234,597 observations from 187 “countries” 1948-1999. Regressors included but not tabulated include: GSP; regional FTA; currency union; log distance; log product GDP; log product real GDP per capita; common language; common border; number land-locked; number island nations; log product area; common colonizer; current colony; ever colony; common country; and year effects.

Analogue to Tomz et al Table 5: Cross-Sectional Analysis, dis-aggregated by status

	Both Formal	Both Informal	Formal-Informal	Formal-Outsider	Informal-Outsider	Obs.
1950	.66 (.12)	.72 (.41)	.50 (.13)	.25 (.10)	.34 (.16)	1115
1955	.79 (.12)	1.19 (.30)	.74 (.13)	.39 (.11)	.42 (.16)	1468
1960	.65 (.12)	.66 (.16)	.33 (.11)	.29 (.10)	.37 (.11)	2625
1965	.36 (.11)	.32 (.17)	.41 (.11)	.24 (.11)	.33 (.13)	3361
1970	.22 (.13)	1.90 (.30)	.78 (.14)	.16 (.13)	.47 (.19)	4737
1975	.07 (.15)	1.06 (.27)	.53 (.16)	.07 (.15)	.47 (.21)	5354
1980	.31 (.16)	1.01 (.28)	.57 (.17)	.35 (.17)	.43 (.21)	5895
1985	.44 (.22)	.77 (.43)	.74 (.23)	.21 (.23)	.58 (.30)	6232
1990	.74 (.30)	.26 (.62)	.85 (.31)	.55 (.31)	.51 (.41)	6620
1995	-.50 (.24)	-.90 (.58)	-.60 (.27)	-.68 (.25)	-.50 (.42)	7640

Regressand: log real trade. Robust standard errors (clustering by country-pairs) in parentheses. OLS.

Regressors not recorded: regional FTA; currency union; log distance; log product real GDP; log product real GDP p/c; common language; land border; number landlocked; number islands; log product land area; common colonizer; currently colonized; ever colony; and common country.

Clearly the effects of different types of participation are economically and statistically different. Are these differences a cause for concern? It would be especially enlightening to know why informal membership seems to have a larger effect on trade than formal membership. *What's going on?*

I also have a more narrow and particular issue. *De Facto* membership seems like it entailed few obligations; TGR discuss how they could easily alter trade policy without even notifying the GATT. To me, it seems that *de facto* membership allowed a country to join in the letter of the GATT but not the spirit of liberalization. This wouldn't be particularly important if the results of TGR didn't rest on *de facto* participation. But dropping the dummies with *de facto* participation seems to weaken TGR's results substantially.⁷

⁷ For the record, the same is true of colonial but not provisional participation.

Dropping *De Facto* GATT Participation on Trade*

	Dyadic Fixed Effects	OLS
Member-Member	.00 (.03)	-.13 (.04)
Member-Colony	.18 (.05)	.32 (.06)
Member-Provisional	-.14 (.05)	-.42 (.07)
Colony-Colony	.96 (.19)	1.35 (.19)
Colony-Provisional	.07 (.14)	.03 (.13)
Provisional-Provisional	-.14 (.26)	-.65 (.23)
Member-Outsider	-.17 (.03)	-.23 (.04)
Colony-Outsider	.12 (.08)	.24 (.10)
Provisional-Outsider	-.27 (.07)	-.42 (.11)

* Robust standard errors in parentheses. 234,597 observations from 187 “countries” 1948-1999. Regressors included but not tabulated include: GSP; regional FTA; currency union; log distance; log product GDP; log product real GDP per capita; common language; common border; number land-locked; number island nations; log product area; common colonizer; current colony; ever colony; common country; and year effects.

Should we worry that *de facto* membership seems to have made weak demands on participants but is important to the results?

Robustness

Participation or Estimation?

Is the real issue *informal participation* or the *estimation technique*? In my work in this area, I’ve always found bigger effects using fixed effects than with pooled OLS; TGR do too. Is it legitimate to rely so heavily on FE and essentially ignore OLS, as do TGR?⁸

The estimation technique makes a substantial difference. The TGR default specification with FE (Table 2, col. 6) indicates that joint participation in the GATT (whether formal or informal) raises the log of trade of .54 (robust standard error of .06), or 72%. Participation by a single country raises trade by .27 (.06), or 31%. If the same equation is estimated with OLS (that is, simply dropping the dyadic fixed effects), the effects drop to .25

(.07) and .10 (.06), or 28% and an insignificant 11%. The differences are economically and statistically large.

That's not bad in itself, but it's important to realize that FE and OLS implicitly ask different questions. OLS includes both time-series and cross-sectional variation. The cross-sectional question is "Do GATT insiders trade more or less than outsiders, *ceteris paribus*?" This seems like a relevant question, but it's one that simply can't be answered with the fixed effects "within" estimator that asks the question "For a typical pair of countries, does a change in GATT status raise or lower trade?" Using dyadic fixed effects means that it's *changes* in status that matter, since FE only use time-series variation. So, why are the OLS results so much lower? Why does the cross-sectional variation give much lower estimates? Is this a cause for concern?

In this particular problem, it's often *exit from* not *entry into* informal membership that matters. That is TGR have found that, e.g., *leaving colonial status tends to reduce trade* (since independent countries don't typically become colonies). Take a colony that's trading with another colony (or a GATT member, if you like). As it moves from colony status to *de facto* status to membership in the GATT, trade falls continuously, *ceteris paribus*. Fair enough, but it makes me worry that something else might happen when a country loses colonial status which leads trade to fall and is conflated with the participation variable. Also, perhaps the effects of entry and exit aren't symmetric. Finally, when countries gained independence and lost their colonial status, the TGR data show that most (60) become *de facto* members; only 14 acceded straight to the GATT. Do we care? Perhaps, if *de facto* status is critical ... and it is, as I showed above.

⁸ Parenthetically, I won't argue about whether countries or dyadic fixed effects are more appropriate; it never seems to matter for me and it's hard for me to get excited about it.

Nit-Picking

TGR have redone a lot of my sensitivity analysis ... but they don't follow it all. Some of the omitted checks may be relevant. Let me mention three issues quickly that I covered but TGR omit.

First, consider simultaneity bias. If countries join GATT in order to stimulate trade, it may be large and positive. This wasn't an issue for me, since my estimates were small and any upwards bias just strengthened my (non-) finding. But TGR can't dismiss it, and should try to deal with it.

Second, adding an AR(1) residual to the TGR estimates has an effect (even sticking with fixed effects). In particular, the coefficient on "Both Participate" falls to .11 (standard error of .04), and the coefficient on "One Participates" becomes negative but tiny.

Third, splitting the data into halves has a big effect on the key coefficients. Here's an analogue to part of my Table 5 (which does sample sensitivity analysis), but with participation instead of GATT membership.

Analogue to Rose Table 5: Sample Sensitivity Analysis

	Dyadic FE	Dyadic FE	OLS	OLS
	Both in GATT	One in GATT	Both in GATT	One in GATT
Default	.54 (.06)	.27 (.06)	.25 (.07)	.10 (.06)
Data before 1980	.20 (.07)	.13 (.06)	.44 (.07)	.29 (.07)
Data after 1979	.30 (.09)	.05 (.08)	-.14 (.10)	-.24 (.10)

Regressand: log real trade. Robust standard errors (clustering by country-pairs) in parentheses.

Regressors not recorded: regional FTA; currency union; log distance; log product real GDP; log product real GDP p/c; common language; land border; number landlocked; number islands; log product land area; common colonizer; currently colonized; ever colony; common country; and year effects.

Note that splitting the sample lowers the effect of GATT participation *in both halves of the sample*, when you use fixed effects (as TGR prefer).

Where's the Big Effect of Participation on Aggregate Trade?

In my original work on the GATT, I used multilateral data as a corroborating check on my bilateral results. When I use the TGR participation variables on multilateral data, I get weak results. The coefficients are positive, but they're small and have marginal statistical effects.

Effects of GATT Participation on Aggregate Trade*

	Formal GATT Membership	GATT Participation
OLS	.05 (.05)	.10 (.06)
Year Effects	.01 (.05)	.07 (.06)
Country Effects	.03 (.04)	.12 (.06)
Year and Country Effects	.03 (.05)	.11 (.06)

* Robust standard errors in parentheses. Controls included but not tabulated: log real GDP per capita; log population; remoteness. 5,476 observations from 168 "countries" 1950-1998.

This is an issue for TGR, since they basically never seen any signs of trade diversion. For instance, in the default TGR results of Table 2, column 6, the "only one participates in GATT" coefficient is 0.26 (standard error of .06).⁹ But if there's no trade diversion, why isn't the aggregate trade creation visible? And don't forget the background fact: trade was growing fast throughout the period (faster than output usually). The GATT usually takes credit for at least some of this growth in trade. Why isn't it detectable with TGR participation?

There's a different way to think about this issue. In my original paper, I provided event studies, which graphically examined the decade around the formal entry of countries into the GATT. I found little; the ratio of aggregate trade to GDP basically didn't change much when one examined openness starting five years before accession and continued

⁹ By my count, TGR provide 46 estimates of the effect on trade of one country participating in GATT; only three of these are negative, all for the WTO era.

through to five years afterwards. What happens when one examines openness around entry into informal GATT participation?

Figure 1 contains four event studies for openness (the ratio of exports plus imports to output) in the decade around GATT entry (they are analogues to the event studies in my *AER* paper). 33 countries formally entered the GATT from the outside; they are portrayed in the top left graphic. The others depict: a) formalization of status for an informal participant; b) entry into informal status from the outside; and c) exit from participation. Figure 2 is identical except that it portrays the residual of openness from a regression on the logs of population and real GDP per capita, as well as country- and time-specific fixed effects.

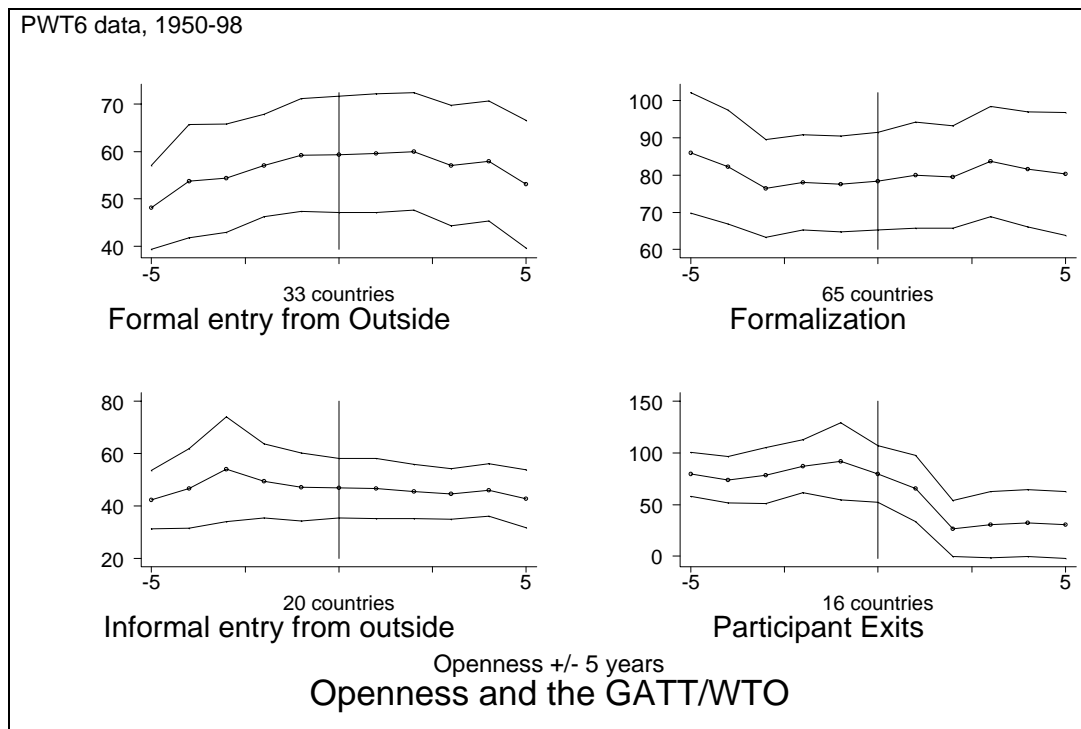


Figure 1: Raw Openness around GATT Entry

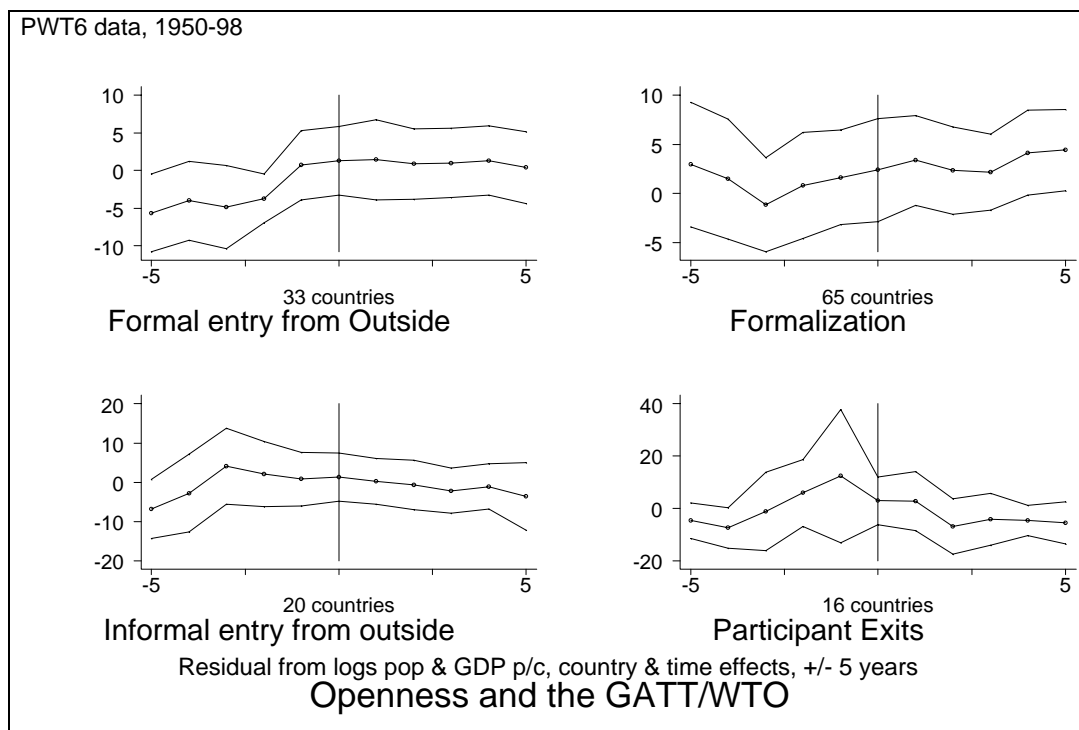


Figure 2: Residual Openness around GATT Entry

When I study the figures I don't see strong evidence that openness rose during the period around either formal or informal GATT entry. Raw openness falls somewhat when countries leave the GATT, but the residual doesn't. Formal entry from the outside seems to raise the residual of openness. But neither entry into informal status nor the formalization of informal status seems to have substantial effects on aggregate trade. Why not? This is an issue. How can participation affect bilateral trade so much if it doesn't have a strong detectable affect aggregate trade?

For the record, comparable event studies for bilateral trade deliver the same (non-) result. In Figure 3, I portray the residual from a regression of the log of bilateral trade on all the determinants that TGR and I study (including time- and dyadic-pair-specific fixed effects) save only GATT participation status. Since there are three switches in status associated with entry into the system (formal entry from the outside; informal entry from the outside; and

formalization of informal status), and three possible states for the partner country (formal member, informal participant, and outsider), there are nine event studies.

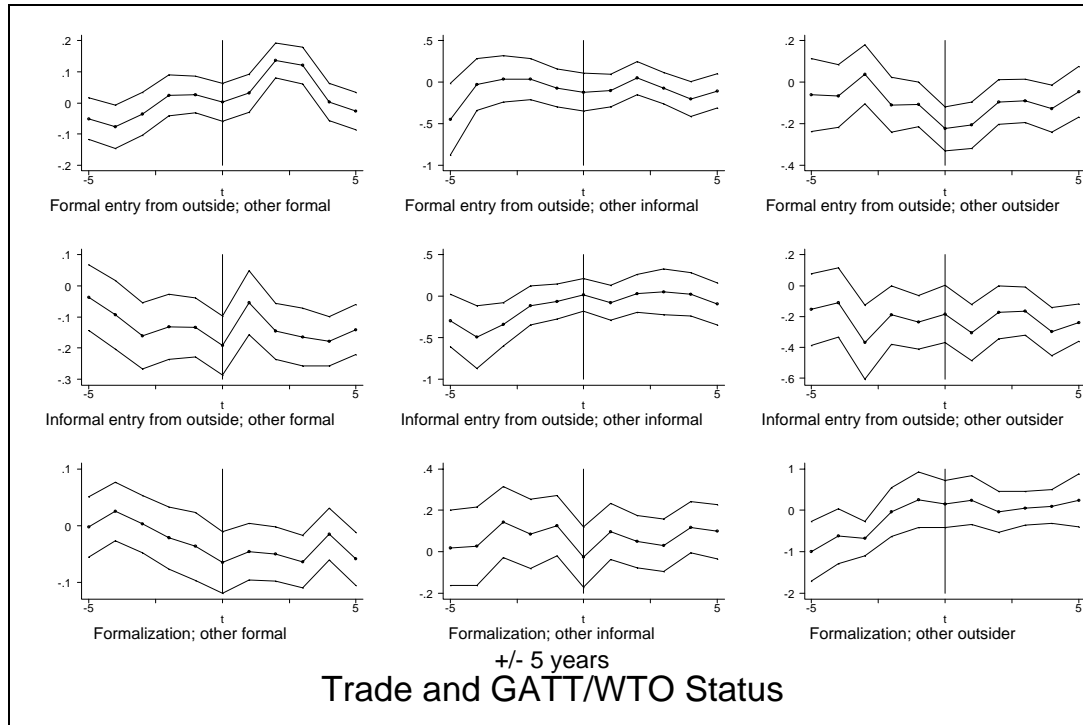


Figure 3: Residual of Bilateral Trade around GATT Entry

When I study Figure 3, I don't see any consistent or strong signs that entry into the system affected bilateral trade. This is true for all three types of "entry", no matter what the status of the partner country. But if TGR are right, shouldn't I be able to see an effect of GATT entry on bilateral trade?

Where's the Effect of Participation on Trade Policy?

I have a whole article (*JIE* 2004) that essentially argues that the non-effect of formal membership on trade *policy* helps explain my non-results of membership on trade. Since trade policy is hard to measure, I used almost seventy measures of it. When I use the TGR

participation variables on the multilateral panel measures of trade policy that I used in that article, I get very weak results:¹⁰

Effects of GATT Participation on Trade Policy*

Regressand	GATT Participation
Tariffs (Import duties, % imports)	1.4 (1.1)
NBER liberalization phase	-.02 (.24)
Index of Economic Freedom	-.03 (.05)
Trade Policy Measure from IEF	-.13 (.15)
Annual Index Trade Liberalization (from FX, Commercial Policy)	-.01 (.02)
Tr2 Annual Index Trade Liberalization (Tariffs, NTBs)	.68 (.17)
Indirect Bias against Agriculture	-.0001 (.0002)
Deviation of trade from simply gravity model	-.19 (1.11)
Deviation of trade from augmented gravity	-.06 (1.07)
Movement towards International Prices	.07 (.03)
Modified Price Distortion Index	-.05 (.03)
Black Market Premium	-.09 (.10)
Openness (Trade, % GDP)	2.9 (2.9)
Trade share of GDP	.01 (.01)

* Robust standard errors in parentheses. Controls included but not tabulated: log real GDP per capita; log population; remoteness; year effects; and country effects.

Dani Rodrik likes to use tariffs as a simple measure of trade policy; his view is that while flawed, they still do a decent job of measuring trade policy. This seems sensible to me. Further, there are many hundreds of country-year observations on tariffs, as measured by the ratio of import duties to imports. The top line in the table above shows that countries that participate in the GATT (either formally or informally) have *higher* tariffs than outsiders, though not significantly so.

¹⁰ I use only the panel measures so that I can use TGR's preferred FE estimation strategy. Others may choose

Let me explore this issue in a little more depth. When I merge the TGR data on GATT membership with the data set from my 2004 *JIE* piece on trade policy, I find that there are 201 observations on countries that were informal participants in the GATT for at least a decade with tariff data. Their tariffs averaged 16.4% of imports. I also have 192 observations for countries that informally participated in the GATT for at least twenty years; these countries had tariffs averaging 16.5%. Finally, I have 138 observations on countries that informally participated in the GATT *for at least thirty years*; their tariffs averaged 18.2%. By way of contrast, there are 409 observations on GATT outsiders; their tariffs average 18.7%. At least superficially, it seems that tariffs of long-term informal GATT participants were both high (absolutely and relative to outsiders) and rising over time.

Such findings are a serious concern for the message of TGR. How can participation affect trade if it doesn't affect trade policy?

Just to be fair: I'm by no means the first person to think that most LDCs have restrictive trade policies. In a book I happen to have on my desk, *The Trade Policies of Developing Countries* by Rajapatirana (AEI 2000), you get few signs of liberal trade or trade reform before 1985 in Tables 1 and 2, and many signs of high average tariffs and widespread quantitative restrictions. Rajapatirana writes:

(p4): "... a comparison of the trade regimes of the 1980s with those of the period in 1950-1980 shows increased differentiation in trade policies among the developing countries. Many East Asian countries took the lead in liberalizing their trade regimes, while nearly all other developing countries maintained restrictive regimes."

(p10): "Prior to the 1990s, developing countries were reluctant to participate in previous rounds and preferred to "free ride" when developed countries reduced barriers on a most-favored-nation basis. They invoked "special and differential" treatment as the reason not to enter into reciprocal negotiations with developed countries. That stance changed in the 1990s ..."

to analyze the many cross-sectional measures of trade policy available at my website.

Smaller Issues

1. The title is inappropriate and misleading. The TGR point is about participation, in direct contrast to the effects of formal membership.
2. Should we worry about the negative late results? In the last line of Table 3, TGR find negative effects (significantly so only for OLS) of participation on trade for the WTO era. Again; in the 1995 row of Table 5, TGR find negative effects. Is this a cause for concern? I think if I'd found TGR's results, I might have concluded that the GATT was more relevant for trade than the WTO.

Summing Up

I'd like to believe the TGR results; really, I would. Mostly I'd like to understand them better. But I'm queasy about them for a number of reasons, including the facts that:

- Given the literature, it is hard for me to believe that GATT could have such a profound effect on developing countries and such a relatively small effect on industrial countries,
- It seems hard to believe that formal GATT membership matters so much less for trade than informal (especially *de facto*) participation,
- I'm suspicious whenever two reasonable estimators give different takes, and here OLS (which uses both time-series and cross-sectional data) gives much smaller results than TGR's preferred dyadic fixed effects estimator (which uses only time-series variation),
- There are a bunch of technical issues (e.g., sensitivity with respect to time, simultaneity bias, handling autoregressive residuals) that cumulatively make me nervous about taking the estimates seriously,

- I don't see how formal or informal entry into the GATT could matter so much when the event studies show a negligible effect in the decade around entry,
- I don't understand how participation can have a large effect on bilateral trade, no detectable trade diversion, and yet a negligible effect on aggregate trade,
- I don't understand how participation can have a large effect on bilateral trade with no substantial effect on tariffs or other measures of trade policy.

Conclusion

Tomz, Goldstein and Rivers provide a fine critique of my 2004 *AER* paper. But let's not lose sight of the question that is asked in the title of that paper, "Do We Really Know that the WTO Increases Trade?" In my research, I have found a consistently negative answer to that question using at the least: a) a panel of bilateral data; b) a large panel of aggregate data; c) a panel of data on trade policy; and d) event studies. I look forward to seeing more research that addresses the question in the large, not just in the smaller confines of the gravity model of trade.